

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

Amendments shown by strikethrough (for deleted matter) or underlining (for added matter).

- 1 (Cancelled).
2. (Previously presented): A sensor arrangement according to claim 43, wherein the flow cell element is removable.
3. (Previously presented): A sensor arrangement according to claim 43, wherein said elastic material has a hardness of 10-95° Shore.
4. (Previously presented): A sensor arrangement according to claim 3, characterised in that said elastic material has a hardness of 45-95° Shore.
5. (Previously presented): A sensor arrangement according to claim 43, wherein the first part is arranged to move slidably with relation to the second part, so that the quartz crystal comes into abutment with the flow cell element in the second part.
6. (Previously presented): A sensor arrangement according to claim 43, wherein the first part is guided between said closed and open positions by means of guide rods.
7. (Previously presented): A sensor arrangement according to claim 43, wherein the first part is guided along a linear path.
8. (Previously presented): A sensor arrangement according to claim 43, wherein the means for receiving the sensor element has a cavity provided with a slot, through which the sensor element can be inserted and an opening through which the crystal of the sensor element can come into contact with the flow cell element.

9. (Previously presented): A sensor arrangement according to claim 43, wherein the second part comprises a sample providing part that has a recess in which the flow cell element is arranged and an operating part that includes means for movement of said first part.

10. (Previously presented): A sensor arrangement according to claim 9, wherein the means for movement of said first part includes a screw which is connected by thread engagement to the first part and which is operated by a handle.

11. (Previously presented): A sensor arrangement according to claim 43, wherein the second part is provided with electrical contacts for connection with electrical contact areas on the sensor element.

12. (Previously presented): A sensor arrangement according to claim 11, wherein the electrical contacts are spring loaded contacting pins.

13. (Currently amended): A sensor arrangement according to claim 11, wherein the electrical contacts are arranged on ~~the~~ a sample providing part.

14. (Previously presented): A sensor arrangement according to claim 43, wherein the recess of the flow cell element has a shape that corresponds to the shape of the first electrode.

15-31. (cancelled)

32. (Previously presented): A flow cell element for use in the piezoelectric sensor arrangement of claim 43, comprising: an abutting part comprising an outwardly open recess, inlet fluid channels, and outlet fluid channels, wherein

said inlet fluid channels and said outlet fluid channels lead the fluid sample through said recess;

said recess is surrounded by an abutting surface;

said abutting surface and a portion of the abutting part closest to the abutting surface comprise an elastic material;

said abutting part is adapted to come into abutment with the piezoelectric quartz crystal in a sensor element when first and second parts of the piezoelectric sensor arrangement are moved from an open position to a closed position; and

said recess is sealingly covered by the crystal, thus forming a flow cell together with the sensor element when said first and second parts of the piezoelectric sensor arrangement are in said closed position.

33. (Previously presented): A flow cell element according to claim 32, wherein said elastic material has a hardness of 10-95° Shore.

34. (Previously presented): A flow cell element according to claim 33, wherein said elastic material has a hardness of 45-95° Shore.

35. (Previously presented): A flow cell element according to claim 32, wherein the abutting surface that surrounds the recess comprises a ridge having a smooth upper surface; the recess has a bottom, and said bottom of the recess is a flat surface.

36. (Previously presented): A flow cell element according to claim 35, the ridge has a width of 0.05-1 mm.

37. (Previously presented): A flow cell element according to claim 32, wherein the recess has a depth of 0.01-0.5 mm.

38. (Previously presented): A flow cell element according to claim 32, wherein the inlet and outlet fluid channels are arranged close to the periphery of the recess and diametrically opposed to each other.

39. (Cancelled) ~~A flow cell element according to claim 32, wherein the recess has extensions in which the extensions the inlet and outlet fluid channels are arranged.~~

40. (Previously presented): A flow cell element according to claim 32, wherein the flow cell element is one piece.

41. (Previously presented): A flow cell element according to claim 32, wherein the elastic material is selected from the group consisting of polyurethane, silicone and PDMS.

42. (cancelled)

43. (Previously presented): A piezoelectric sensor arrangement for analysis of at least one fluid sample, comprising:

- a signal source;

- a measuring device; and

- a docking system comprising a first part and a second part, wherein

- said first part comprises means for receiving a sensor element which sensor element comprises a piezoelectric quartz crystal having a freely accessible electrode and which electrode is positioned to contact the fluid sample when in use, said means for receiving comprising an opening allowing said sensor element to contact a flow cell element when in use;

- said second part comprises fluid channels to conduct the sample and a flow cell element;

- said flow cell element comprises an abutting part provided with an outwardly open recess surrounded by an abutting surface, inlet fluid channels, and outlet fluid channels;

- said inlet fluid channels and said outlet fluid channels are configured to lead the fluid sample through said recess;

- said abutting surface and a portion of said abutting part closest to said abutting surface comprise an elastic material;

- said elastic material is capable of forming a seal against the piezoelectric quartz crystal;

- said first and second part are movable in relation to each other between a closed position and an open position;

- when said first and second parts are moved from said open position to said closed position an upper surface of said abutting part of said flow cell element comes into abutment with said piezoelectric quartz crystal; and

when said first and second parts are in said closed position a seal forms between said piezoelectric quartz crystal and said recess of said flow cell element to create a flow cell.

44. (Cancelled)

45. (Cancelled)

46. (Previously presented): A flow cell element according to claim 32, wherein the recess has a depth of 0.05-0.2 mm.

47. (Cancelled)